

without other symptoms or a febrile rise. The tenth animal and the virus control died of experimental poliomyelitis.

The age distribution of serum samples is: two 15 years, one 16, one 18, two 20, and one each of 23, 25, 26, and 35 years. The person furnishing the negative specimen was 25 years of age. An inquiry into the incidence of this disease in Liberia disclosed a lack of recorded data on the subject. Rice⁵ writes that he has not seen or heard of poliomyelitis cases but points out that his practice is confined to adult employees; he adds that the infrequent paralyzes seen might be interpreted as following this condition. Strong and Shattuck⁶ have encountered several cases of probable poliomyelitis in Liberia. Johnson,⁷ Director of the Medical and Sanitary Service of Nigeria, British West Africa, informs us that acute cases of poliomyelitis are occasionally observed in the natives of that region.

The significance of the neutralization test in this connection implies that it is a specific immune reaction, which has yet to be established.

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Effect of Pancreatic Juice on Absorptive Mechanism of the Gall Bladder.

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Wolfer¹ showed that pancreatic juice injected into the gall bladder of the dog caused marked histologic changes in the wall of the viscus. The possibility of this being the cause of cholecystitis clinically was thoroughly discussed by him. The secretory pressure of the pancreas is much higher than that of the liver² and in case of blockage of the ampulla by stone, anatomic arrangements are such in a high percentage of human subjects that the gall bladder might fill with pancreatic secretions.^{3, 4}

⁵ Rice, J. B., personal communication.

⁶ Strong, R. P., and Shattuck, G. C., *Harvard African Exped.*, 1926-27. Harvard Univ. Press, Cambridge, 1930, **1**, 360.

⁷ Johnson, W. B., personal communication.

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¹ Wolfer, J. A., *Surg., Gyn. and Obstet.*, 1931, **53**, 433.

² Dragstedt, L. R., personal communication.

³ Cameron, A. L., and Noble, J. F., *J. Am. Med. Assn.*, 1924, **87**, 1410.

⁴ Westphal, K., *Z. f. klin. Med.*, 1929, **109**, 55.

Our studies on 19 dogs were aimed to determine if the presence of pancreatic juice would affect the permeability of the gall bladder to the constituents of the bile, especially the bile acids. The pancreatic juice (kindly furnished by Dr. L. R. Dragstedt) was activated and contained about 1000 units. It was injected directly into the gall bladder by needle puncture in some cases, in others, through a ureteral catheter up the common and cystic duct. Four cc. were used. The duration of the experiments was 4 days. The results were as follows:

1. Pathological changes of mild degree were evident in the gall bladder wall in most cases. These, however, were not marked. The susceptibility of the dog's gall bladder to slight stasis and infective influences, as we have previously noted⁵ is so marked that it would be hazardous to assert that the changes found were not due to the manipulations.
2. In some experiments the juice was Berkefeld filtered. In these experiments the pathological and chemical changes were much less than from the unfiltered juice.
3. The average cholesterol content of the bile was not reduced, but the concentration of bile acids was reduced to less than one-third of the values found in control experiments. This is in addition to the fact that the total fluid contents of the gall bladders was considerably less than normal.
4. In 5 experiments with unfiltered juice all the bile salts had been absorbed, leaving the cholesterol precipitated.
5. In *in vitro* experiments with mixtures of bile and pancreatic juice, no such changes were found indicating that in the *in vivo* experiments the bile salts were absorbed and not destroyed.

Conclusion. The presence of pancreatic juice in the dog's gall bladder causes a marked differential absorption of bile salts at the expense of cholesterol, and hence tends to precipitate the latter.

⁵ Andrews, E., and Hrdina, L., *Arch. Surg.*, 1931, **23**, 201.